

## APPENDIX – A

Calculations for the individual disposition types enclosed here are general in form and can easily be modified to reflect slight changes in disposition structure from deal to deal.

**DPO – Discounted Pay Off** - strategy involves two potential cash payments, timing 1 (T1) and timing 2 (T2). Expenses are incurred at T1 and T2. Total outstanding Unpaid balance (UPB) is decreases as payments are received. There are two types of DPO records Easy and Hard DPOs, The aggregate cash flows and expenses for each type are totaled at the top of the worksheet.

**Timings:**

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's payment and expense timings are adjusted based on the UPB bin that the record is associated with.

**Expenses:**

Legal expenses are incurred at the time of the cash payments. These expenses are calculated as a percentage of the recovered amount. The percentage used is obtained from the "Legal fees based on % recovered UPB" . DPO expenses are calculated during the "move data" function and placed in the expense section of the DPO tab according the payment timing.

All legal expense are adjusted using the Value added tax (VAT) tax also located on the assumptions page.

**EXAMPLE:**

Expected Recovery (ER) = \$842,238, T1 = 12 months, T2 = 18 months ReSecured = 1 a secured loan flag:

**Results:**

Cash payment at Time 12 of 421,119

Cash payment at Time 18 of 421,119

**Expenses:**

T1 Legal - Lookup in legal ReSecured 421,119 = 13.8%; Expense = 58,114

T2 Legal - Lookup in legal ReSecured 421,119 = 13.8%; Expense = 58,114

These values are calculated and placed in the correct timing slot in on the DPO tab during the move data function execution.

**Inferred** records are generated via proprietary technology and involve two potential cash payments, T1 and T2. Expenses are incurred at T1 and T2. Total outstanding UPB is decreases as payments are received. The aggregate cash flows and expenses are totaled at the top of the worksheet.

**Timings:**

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's payment and expense timings are adjusted based on the UPB bin that the record is associated with.

**Expenses:**

Legal expenses are incurred at the time of the cash payments. These expenses are calculated as a percentage of the recovered amount. The percentage used is obtained from the "Legal fees based on % recovered UPB" . Inferred expenses are calculated during the "move data" function and placed in the expense section of the Infer tab according the payment timing.

All legal expense are adjusted using the VAT tax also located on the assumptions page.

**EXAMPLE:**

ER = \$1,092.52, T1 = 26, T2 = 48 ReSecured = 1:

Results:

Cash payment at Time 26 of 1073

Cash payment at Time 48 of 19.51

Expenses:

T1 Legal - Lookup in legal ReSecured 1073 = 23%; Expense = 246.8

T2 Legal - Lookup in legal ReSecured 19.51 = 23%; Expense = 4.487

**Compliance** records refer to questionable borrowers due to legal of other circumstances and are handled in the same fashion as the DPO strategy using two potential cash payments, T1 and T2. Expenses are incurred at T1 and T2. Total outstanding UPB is decreases as payments are received. There are three types of Compliance records "Grey-White", "Grey-Black" and "Black", The aggregate cash flows and expenses for each type are totaled at the top of the worksheet.

Timings:

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's payment timings are adjusted based on the UPB bin that the record is associated with.

Expenses:

Legal expenses are incurred at the time of the cash payments. These expenses are calculated as a percentage of the recovered amount. The percentage used is obtained from the "Legal fees based on % recovered UPB" . Compliance record expenses are calculated during the "move data" function and placed in the expense section of the Compliance tab according the payment timing.

All legal expense are adjusted using the VAT tax also located on the assumptions page.

**EXAMPLE:**

ER = \$2,675,443, T1 = 18, ReSecured = 1:

Results:

One cash payment at Time 18 of 2,675,443

Expenses:

T1 Legal - Lookup in legal ReSecured 2,675,443 = 7.59%; Expense = 203,066

**Restructured loans** are contained in the "Restruct" tab. This strategy involves a possible cash payment "T1" and a stream of future payments associated with the new restructured loan. The restructured loan may involve a principle moratorium period where in only interest payments are made.

Cash Flows:

The cash flows that result from the restructured loan are contained in two sections of the worksheet. The first section contains the T1 cash payment and the principle payments associated with the loan. This section also contains a cash payment associated with any remaining principle value beyond the term of the analysis (48 months), the remaining value is discounted back at a separate "Residual value discount rate" located on the assumptions sheet. Principle payments are calculated using the PPMT excel function.

The format of the PPMT function is:

Returns the payment on the principal for a given period for an investment based on periodic, constant payments and a constant interest rate.

Syntax:

PPMT(rate,per,nper,pv,fv,type)

Rate is the interest rate per period.

Per specifies the period and must be in the range 1 to nper.

Nper is the total number of payment periods in an annuity.

Pv is the present value  $\frac{1}{4}$  the total amount that a series of future payments is worth now.

Fv is the future value, or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (zero), that is, the future value of a loan is 0.

Type is the number 0 or 1 and indicates when payments are due.

Set type equal to 1 if payments are due (0 or omitted At the end of the period , 1 At the beginning of the period)

PPMT(Assumptions!\$D\$5,(\$L\$19:\$BG\$19)-\$F21,(\$G21-\$F21),\$E21,0,0)

This is applied only if the period/month falls within the loan period.

Assumptions!\$D\$5 = monthly interest rate

(\$L\$19:\$BG\$19)-\$F21 = This period/month minus the period/month that the interest only payments end.

(\$G21-\$F21) = Length of loan - Nper - last payment timing minus end of interest only period.

\$E21 = Loan Amount

0 = FV = 0

0 = Payment received at end of period.

The second section contains the interest payments associated with the loan. The interest rate is obtained from the "Assumed interest rate (Monthly)" value on the assumptions sheet. The IPMT excel function is used to calculate the interest portion of the cash flow stream.

The format of the IPMT function is:

Returns the interest payment for a given period for an investment based on periodic, constant payments and a constant interest rate. For a more complete description of the arguments in IPMT and for more information about annuity functions, see PV.

Syntax

IPMT(rate,per,nper,pv,fv,type)

Rate is the interest rate per period.

Per is the period for which you want to find the interest and must be in the range 1 to nper.

Nper is the total number of payment periods in an annuity.

Pv is the present value, or the lump-sum amount that a series of future payments is worth right now.

Fv is the future value, or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (the future value of a loan, for example, is 0).

Type is the number 0 or 1 and indicates when payments are due. If type is omitted, it is assumed to be 0.

IPMT(Assumptions!\$D\$5,(\$BK\$19:\$DF\$19)-D21,(\$G21-\$D21),\$E21)

This is applied only if a interest payment month is encountered.

Assumptions!\$D\$5 = monthly interest rate

(\$BK\$19:\$DF\$19)-D21 = This period/month minus the T1 period/month that represent the start of the loan.

(\$G21-\$D21) = The length of the loan period

\$E21 = The Loan Amount.

Omitted = FV = 0.

Omitted = Payment received at end of period.

Timings:

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's payment timings are adjusted based on the UPB bin that the record is associated with.

T1 is the timing of the cash payment.

T1 + MonthsOfFinancing field = length of loan.

T1 + MonthsOfPrincMortatorium = length of interest only period.

Expenses:

Legal expenses are incurred at the time of the cash payment and at the start of the principle payment period and are calculated as a percentage of the recovered amounts (Cash Payment at T1 and the Loan Amount). The percentage used is obtained from the "Legal fees based on % recovered UPB" .

All legal expense are adjusted using the VAT tax also located on the assumptions page.

EXAMPLE:

ER = \$819,285, T1 = 9, T2 = 12, ReSecured = 0:

Results:

One cash payment at Time 9 of 40,964

Loan start Principle+Interest Time 12, loan Amount = 778,320

Expenses:

T1 Legal - Lookup in legal Not secured 40,964 = 28.75%; Expense = 11,777

T2 Legal - Lookup in legal Not secured 778,320 = 11.5%; Expense = 89,507

**Litigation With Restructured loans** are contained in the "LitigateWRes" tab. This strategy involves a cash payment "T1" and a possible stream of future payments associated with the new restructured loan.

Cash Flows:

The cash flows that result from this strategy are contained in two sections of the worksheet. The first section contains the T1 cash payment and the principle payments associated with the loan. This section also contains a cash payment associated with any remaining principle value beyond the term of the analysis (48 months), the remaining value is discounted back at a separate "Residual value discount rate" located on the assumptions sheet. Principle payments are calculated using the PPMT excel function.

The format of the PPMT function is:

Returns the payment on the principal for a given period for an investment based on periodic, constant payments and a constant interest rate.

Syntax:

PPMT(rate,per,nper,pv,fv,type)

Rate is the interest rate per period.

Per specifies the period and must be in the range 1 to nper.

Nper is the total number of payment periods in an annuity.

Pv is the present value of the total amount that a series of future payments is worth now.

Fv is the future value, or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (zero), that is, the future value of a loan is 0.

Type is the number 0 or 1 and indicates when payments are due.

Set type equal to 0 if payments are due (0 or omitted At the end of the period , 1 At the beginning of the period)

PPMT(Assumptions!\$D\$5,(\$M\$19:\$BH\$19)-\$F21,(\$G21-\$F21),\$E21,0,0)

This is applied only if the period/month falls within the loan period.

Assumptions!\$D\$5 = monthly interest rate

(\$M\$19:\$BH\$19)-\$F21 = This period/month minus the period/month that the interest only payments end.

(\$G21-\$F21) = Length of loan - Nper - loan end minus loan start.

\$E21 = Lon Amount

0 = FV = 0

0 = Payment received at end of period.

The second section contains the interest payments associated with the loan. The interest rate is obtained from the "Assumed interest rate (Monthly)" value on the assumptions sheet. The IPMT excel function is used to calculate the interest portion of the cash flow stream.

The format of the IPMT function is:

Returns the interest payment for a given period for an investment based on periodic, constant payments and a constant interest rate. For a more complete description of the arguments in IPMT and for more information about annuity functions, see PV.

Syntax

IPMT(rate,per,nper,pv,fv,type)

Rate is the interest rate per period.

Per is the period for which you want to find the interest and must be in the range 1 to nper.

Nper is the total number of payment periods in an annuity.

Pv is the present value, or the lump-sum amount that a series of future payments is worth right now.

Fv is the future value, or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (the future value of a loan, for example, is 0).

Type is the number 0 or 1 and indicates when payments are due. If type is omitted, it is assumed to be 0.

IPMT(Assumptions!\$D\$5,(\$BK\$19:\$DF\$19)-D21,(\$G21-\$D21),\$E21)

This is applied only if a interest payment month is encountered.

Assumptions!\$D\$5 = monthly interest rate

(\$BK\$19:\$DF\$19)-D21 = This period/month minus the T1 period/month that represent the start of the loan.

(\$G21-\$D21) = The length of the loan period

\$E21 = The Loan Amount.

Omitted = FV = 0.

Omitted = Payment received at end of period.

Timings:

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's payment timings are adjusted based on the UPB bin that the record is associated with.

T1 is the timing of the cash payment.

T1 + MonthsOfFinancing field = length of loan.

T1 + MonthsOfPrincMortatorium = length of interest only period.

Expenses:

Legal expenses are incurred at the time of the cash payment and at the start of the principle payment period and are calculated as a percentage of the recovered amounts (Cash Payment at T1 and the Loan Amount). The percentage used is obtained from the "Legal fees based on % recovered UPB" .

All legal expense are adjusted using the VAT tax also located on the assumptions page.

EXAMPLE:

ER = \$9,134,497, T1 = 36, ReSecured = 0

Results:

One cash payment at Time 36 of \$9,134,497.

Expenses:

T1 Legal - Lookup in legal Not secured 9,134,497 = 4.60%; Expense = \$420,187

**Litigation With Foreclosure records** are contained in the "LitigateForeClose" tab. This strategy involves two events "T1" and "T2". T1 can be either the event of obtaining ownership via foreclosure or obtaining ownership and selling the property in the same event. If T1 is a sales transaction then there would be no T2 event. T2 will occur when the obtaining ownership event and sales events are at different timings.

Cash Flows:

The first section contains the T1 OR T2 cash payment and represent the recovered amount associated with the sales transaction.

Timings:

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's event timings are adjusted based on the UPB bin that the record is associated with.

NOTE: Any Timing beyond 48 months will occur in the 48th month.

Expenses:

Expenses are calculated in the second section of the worksheet.

Legal expenses are incurred at the time of each event and are calculated as a percentage of the recovered amount. The percentage used is obtained from the "Legal fees based on % recovered UPB" .

In addition to legal expenses, restate transaction expenses are incurred at each event. These expenses are obtained from the "Closing Costs Table LF and DIL (% of GDP)" section of the assumptions sheet. some of these expenses are incurred at both events, (Pub Notary, Pub Registry, State Aq. Tax, Appraisal Fee and Brokerage fees)

Other are dependent on the Resecured and InLitigation fields:

If the record is Real-estate secured ReSecured = 1 then Certificate filing fees apply

If the record is in litigation InLitigation = 1 then Litigation Publishing fees apply at T1

If the record is NOT in litigation InLitigation = 0 then New Litigation fees apply at T1

NOTE: Any Timing beyond 48 months will occur in the 48th month.

All legal expense are adjusted using the VAT tax also located on the assumptions page.

EXAMPLE:

ER = \$1,066,835, T1 = 39, T2 = 51, ReSecured = 0, InLitigation = 1:

Results:

One cash payment at Time 48 of \$1,066,835.

Expenses:

T1 Legal - Lookup in legal Not secured 1,050,000 = 5.75%; Expense = \$61,343

Closing - 1,050,000 \* 3.6212%(sum of Pub Notary, Pub Registry, State Aq. Tax, Appraisal Fee) = \$38,632

Plus Litigation Publishing cost of \$1,438

Total T1 expenses = \$101,413

T2 Legal - Lookup in legal Not secured 1,050,000 = 5.75%; Expense = \$61,343

Closing - 1,050,000 \* 4.4338%(Brokerage fee) = \$47,301

Total T2 = \$108,644

**Deed In Lieu records** refer to cases where deed to property is obtained in lieu of loan repayment and are contained in the "DeedInLieu" tab. This strategy involves two events "T1" and "T2". T1 can be either the event of obtaining ownership via foreclosure or obtaining ownership and selling the property in the same event. If T1 is a sales transaction then there would be no T2 event. T2 will occur when the obtaining ownership event and sales events are at different timings.

Cash Flows:

The first section contains the T1 OR T2 cash payment and represent the recovered amount associated with the sales transaction.

Timings:

Timings are obtained as part of the underwriting data from the database. They are adjusted during the "move data" function utilizing the "Delays by UPB bin" section on the assumptions page. Each record's event timings are adjusted based on the UPB bin that the record is associated with.

NOTE: Any Timing beyond 48 months will occur in the 48th month.

Expenses:

Expenses are calculated in the second section of the worksheet.

Legal expenses are incurred at the time of each event and are calculated as a percentage of the recovered amount. The percentage used is obtained from the "Legal fees based on % recovered UPB" .

In addition to legal expenses, restate transaction expenses are incurred at each event. These expenses are obtained from the "Closing Costs Table LF and DIL (% of GDP)" section of the assumptions sheet. some of these expenses are incurred at both events, (Pub Notary, Pub Registry, State Aq. Tax, Appraisal Fee and Brokerage fees)

Other are dependent on the Resecured and InLitigation fields:

If the record is Real-estate secured ReSecured = 1 then Certificate filing fees apply

If the record is in litigation InLitigation = 1 then Litigation Publishing fees apply at T1

If the record is NOT in litigation InLitigation = 0 then New Litigation fees apply at T1

NOTE: Any Timing beyond 48 months will occur in the 48th month.

All legal expense are adjusted using the VAT tax also located on the assumptions page.

EXAMPLE:

ER = \$1,050,000, T1 = 27, T2 = 51, ReSecured = 0, InLitigation = 1:

Results:

One cash payment at Time 48 of 1,050,000.

Expenses:

T1 Legal - Lookup in legal Not secured deedInLieu 1,050,000 = 5.75%; Expense = 60,375

Closing - 1,050,000 \* 3.6212%(sum of Pub Notary, Pub Registry, State Aq. Tax, Appraisal Fee) = \$38022

Plus Litigation Publishing cost of \$1,438

Total T1 expenses = 99,835

T2 Legal - Lookup in legal Not secured deedInLieu 1,050,000 = 5.75%; Expense = 60,375

Closing - 1,050,000 \* 4.4338%(Brokerage fee) = \$46555

Total T2 = \$106,930